

**AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES  
MADE, AND LISTING OF ALL CLAIMS WITH PROPER IDENTIFIERS**

1-55 (Cancelled)

56. (Previously presented) The method of claim 75, wherein the temperature of the solvent and the temperature of the transport units applied to the support is less than 50° C.
57. (Previously presented) The method of claim 75, wherein the transport units have a particle size in a range between 0.2  $\mu$ m and 200  $\mu$ m at a solid state of aggregation at a temperature of less than 90°C.
58. (Previously presented) The method of claim 57, wherein the temperature is less than 50°C.
59. (Previously presented) The method of claim 57, wherein the particle size is between 2  $\mu$ m and 40  $\mu$ m.
60. (Previously presented) The method of claim 75, wherein the support is held at a temperature of at least 10° C lower as compared to the temperature of the transport units until starting the linking reaction of the monomers to the molecules on the support.

61-65. (Cancelled)

66. (Previously presented) The method of claim 75, wherein the monomers on the support are cooled and deep-frozen.
67. (Currently amended) The method of claim 75, wherein the monomers contain include at least one element or bind to such particles that include an

element selected from the group consisting of: magnetic constituents; diphenyl formamide; ~~preliminary stages for~~ monomers, dimers, trimers suitable for combinatorial synthesis; ~~preliminary stages of~~ D amino acids, L amino acids, nucleosides, derivatized nucleosides[,] or mirror images ~~thereof, or~~ derivatives thereof; polystyrene and cellulose.

68. (Withdrawn) The method of claim 67, wherein the cellulose is linked with one or several layers of monomers.
69. (Currently amended) The method of claim 75, further comprising the step of, after ~~a first cycle of the linking reaction reactions~~, detaching protective groups by standard methods so as to form free amino- or hydroxyl groups for linkage with preliminary stages of monomers.
70. (Previously presented) The method of claim 75, wherein the support used is one or more selected from the group consisting of polystyrene films, paper, CDs, MODs, DVDs or FMDs.
71. (Currently amended) The method of claim 75, wherein the transport units with immobilized monomers are ~~moved applied to the support~~ by means of applying an electrical voltage or magnetic fields.

72-74 (Cancelled)

75. (Currently amended) A method for applying substances such as monomers to a support for the combinatorial synthesis of molecule libraries, comprising the steps of:

first embedding at least two different amino acid monomers or oligonucleotide monomers ~~in a matrix~~ at a temperature of less than 90° C ~~provided in the form of~~ within a solvent that is in a solid state of aggregation, thereby forming monomer-immobilizing transport units;

applying these transport units in the solid state of aggregation onto a suitable solid support by laser printing at a temperature of less than 90° C;

wherein after application to the support, the transport units are remaining in the solid state of aggregation;

thereafter mobilizing the monomers and diffusing the monomers within the solvent by changing the transport units from a solid state of aggregation to a liquid state of aggregation, and

covalently linking the thus mobilized monomers to molecules located on the support through a linking reaction, thereby yielding a number of different monomers coupled to the support in defined locations[.] and washing away non-linked monomers

applying more than one layer of monomers to the support ~~followed by a coupling of monomers to the support in precise locations, whereby monomers from a second layer are covalently linked to monomers from a first layer that were previously in each case followed by covalently linking the monomers linked to the support[,] and washing away the transport units and non-linked monomers.~~

76.-77. (Cancelled)

78. (Previously presented) The method of claim 75, wherein the temperature at the embedding step is in a range between -10° C and 80° C.

79. (Previously presented) The method of claim 78, wherein the range is between 0°C and 40°C.

80. (Currently amended) A method for the combinatorial synthesis of molecule libraries comprising the steps of:

- a) applying amino acid monomers or oligonucleotide monomers to a suitable solid support by positioning transport units in a solid state of aggregation at different times through laser printing on the support, the transport units comprising immobilized monomers, wherein the transport units differ from each other by the monomers immobilized within;
- b) inducing a change in the state of aggregation in the immobilized monomers from solid to liquid by means of energy supply or by a chemical solvent to thereby effect a free diffusion of the monomers on the support;
- c) then coupling to the support at least two different of the so diffused monomers at the same time in one single combinatorial synthesis by means of reactive groups on the support;

~~repeating the steps a) c) to generate a library of different molecules at different positions on the support;~~

~~repeatedly applying more than one layer of said monomers to the support followed by a coupling of monomers to the support in precise defined locations to generate a library of different molecules at different positions on the support, in each case followed by covalently linking the monomers to the support, and washing away the transport units and non-linked monomers.~~

81. (Currently amended) The method of claim 80, wherein the monomers in the transport units in their immobilized state are blocked from reacting with the reactive groups on the support.

82. (Previously presented) The method of claim 80, wherein the monomers for the combinatorial synthesis array are peptides or nucleic acids for forming a

patterned deposition of peptide or nucleic acid monomers on the support. 83.

(Cancelled

84. (Previously presented) The method of claim 75, wherein the laser printing is carried out with one selected form the group consisting of laser printer, laser copier and arrays of microlasers.

85. (Withdrawn)

86. (Previously presented) The method of claim 75, wherein mixtures of amino acid monomers or oligonucleotide monomers are used.

87. (New) A method for applying substances to a support for the combinatorial synthesis of molecule libraries, comprising the steps of:

- embedding peptide or nucleic acid monomers into a matrix that includes at least one solvent at a temperature of less than 90° C at a solid state of aggregation thereby forming transport units, said transport units differ from each other by the monomers immobilized within; wherein the monomers are selected from the group consisting of amino acid monomers, nucleic acid monomers and derivatives of amino acid or nucleic acid monomers suitable for solid phase synthesis;

- electrostatically charging said transport units and positioning by laser printing, at different times, the transport units to a solid support, whereby the transport units remain in a solid state of aggregation and the monomers within the transport units are temporarily blocked from coupling to the support;

- changing the transport units from a solid state of aggregation to a liquid state of aggregation, thereby mobilizing the monomers and diffusing the monomers within the transport units thus permitting a free diffusion of the monomers;

- covalently linking the thus mobilized monomers to molecules located on the support through a linking reaction, thereby yielding a number of different monomers coupled to the support,
- repeatedly applying further monomers in defined locations, in each case by covalently linking the monomers to previously linked monomers and washing away all non-linked molecules.